

# An Effective One-Handed Band Removal Tool

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## ABSTRACT

An efficient tool for one-handed band removal (sizes 1B through 8) is described using a modified piston-ring installer tool.

## DISCUSSION

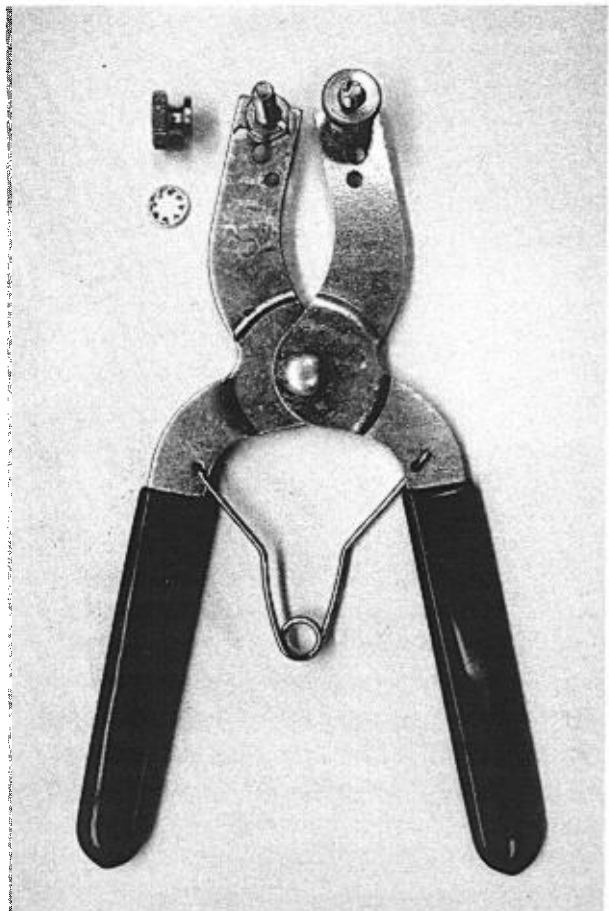
The removal of leg bands is necessary when replacing worn bands, or for the removal of overlapped or improperly sized bands. Several methods have been described to accomplish this task, but most require two persons to remove a band (McClure 1984, Wedeking et al. 1995). Recent papers describing methods for leg band removal by a solo bander have used surgical forceps, or a combination of scissors and automotive retaining ring pliers (Rose 1962, Howard 1999).

I have found that a modified piston-ring installer tool works superior to the above-described methods when either one or more banders are involved in removal of butt-end leg bands. This tool works efficiently with any band size from 1B up to and including size 7 or 8 bands, although retaining ring pliers (Howard 1999) work quite well alone on larger duck- and goose-sized leg bands.

Removing the expansion holders on the end of the tool modifies the piston-ring expansion tool. Drilling out the rivets that hold these parts to the tool leaves a hole in the tip of each arm of the expansion tool. A #10/32 steel bolt one inch in length is inserted into each hole and secured with a nut. To use the tool, the leg of the bird with the band to be removed is inserted between the two screws; the leg band is aligned such that the butt joint is pointing straight up. Two thin wires are inserted on opposite sides of the band. One end of the uppermost wire is wrapped several times around the upper screw. The other end of the wire is wrapped

in the opposite direction around the same screw (upper screw). The lowermost wire is wrapped similarly around the lower screw. (Note if the wires slip around the screws, it is advisable to leave an excess of each end of the wrapped wire free after wrapping both ends around the screws, and the free ends are then twisted around each other to fully secure the wires to the screws). A #10 brass thumbscrew can be tightened over the wires on the screws after adding a #10 internal steel lock washer (it is best to run the ends of the wires through the lock washer). Alternatively, two additional holes can be drilled in the end of the tool, the wires simply slipped through the holes, and the free ends twisted together to secure them (see additional holes in tool in Fig. 1). Once both wires are secured, the

Fig. 1. Modified piston-ring installer tool.



squeezing of the handles of the tool applies equal pressure to both sides of the leg band, easily opening the band.

Obviously, the selection of an appropriate sized wire with an adequate tensile (breaking) strength is imperative to the success of this technique. Twenty-eight gauge **annealed** steel wire (breaking strength of about 4.5 kg = 10 lbs) works well with band sizes 1B through 3A. If there is not sufficient room to insert the wires in the smallest bands, then one must use scissors to partially open the bands first, as described by Howard (1999). Larger bands, sizes 4A through 5, require 24 gauge galvanized steel wire, which has a breaking strength of about 11.3 kg (25 lbs). For the largest bands (7 and 8), 22 gauge galvanized steel wire (breaking strength about 18.1 kg = 40 lbs) will work quite well. These size wires allow adequate clearances between the bird's leg and the appropriate band. If thinner wires are needed, one could use tungsten wire, which has an exceptionally high tensile strength; however, tungsten wire is quite expensive.

**Equipment** – The only source for the piston-ring installer tool (Fig. 1) that I have been able to find is *AutoZone* automotive parts stores (OEM #25049, \$4.99). *AutoZone* also carries the Snap Ring Plier Set (OEM #25012, \$11.99) used for the largest bands. I purchased all of the wires (National Mfg. Co., Sterling, IL), nuts, and bolts at local hardware stores.

#### LITERATURE CITED

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- Wedeking, P., H. Suthers, and J. Bickal. 1995. A simple method for removing leg bands. *N. Am. Bird Bander* 20:59.



Pen and Ink Drawing by Carol Rudy